

**What Is Claimed Is:**

1           1.    An iris, comprising:  
2                a stator assembly comprising a frame  
3 coupled to an electrically wound substantially  
4 annular magnetic core;  
5                a rotor rotatably coupled to said  
6 substantially annular magnetic core and defining a  
7 channel; and  
8                a diaphragm coupled to said stator assembly  
9 comprising a plurality of diaphragm leaves pivotally  
10 arranged to form an adjustable aperture substantially  
11 concentric with said channel; a first portion of at  
12 least one of said plurality of diaphragm leaves  
13 coupled to said stator, a second portion of another  
14 of said plurality of diaphragm leaves coupled to said  
15 rotor.

1           2.    The iris of claim 1 further comprising  
2 a body coupled to said stator assembly.

1           3.    The iris of claim 2 further comprising  
2 a sensor coupled to said body for detecting aperture  
3 diameter data.

1           4.    The iris of claim 3 further comprising  
2 an actuator coupled to said body, said actuator  
3 adapted to provide electrical current through  
4 windings on said electrically wound magnetic core

5 such that said rotor rotates in response to said  
6 electrical current.

1           5. The iris of claim 4 further comprising  
2 a controller coupled to said body adapted to receive  
3 data from said sensor, said controller containing  
4 logic designed to activate said actuator in response  
5 to said data.

1           6. The iris of claim 2 wherein said body  
2 comprises a telescope.

1           7. The iris of claim 2 wherein said body  
2 comprises a camera.

1           8. The iris of claim 2 wherein said body  
2 comprises a pipe.

1           9. An iris system comprising:  
2 a first annular member comprising a first  
3 frame coupled to a first magnetic core, said first  
4 frame comprising a sidewall, a first annular element  
5 circumjacent at one end of said sidewall, a second  
6 annular element circumjacent at another end of said  
7 sidewall, said first annular element having a first  
8 opening, said second annular element having a second  
9 opening such that a first channel is defined through  
10 said first frame;

11 a second annular member comprising a second  
12 frame coupled to a second magnetic core juxtaposing  
13 said first magnetic core, said second annular member  
14 rotatably coupled to said first annular member such  
15 that a second channel is defined substantially  
16 concentric with said first channel; and

17 a plurality of leaves adapted to rotate to  
18 form an adjustable aperture substantially concentric  
19 with said first channel, a first portion of a first  
20 leaf of said plurality of leaves rotatably coupled to  
21 said first annular element of said first annular  
22 member, a second portion of a second leaf of said  
23 plurality of leaves rotatably coupled to said second  
24 annular member.

1 10. The iris of claim 9 further comprising  
2 a body coupled to said first annular member.

1 11. The iris of claim 10 further  
2 comprising a sensor coupled to said body for  
3 detecting aperture diameter data.

1 12. The iris of claim 11 further  
2 comprising an actuator coupled to said body, said  
3 actuator adapted to send electrical current through  
4 windings on said first magnetic core such that said  
5 second annular member rotates in response to said  
6 electrical current.

1           13. The iris of claim 12 further  
2 comprising a controller coupled to said body adapted  
3 to receive data from said sensor, said controller  
4 containing logic designed to activate said actuator  
5 in response to said data.

1           14. The iris of claim 10 wherein said body  
2 comprises a telescope.

1           15. The iris of claim 10 wherein said body  
2 comprises a camera.

1           16. The iris of claim 10 wherein said body  
2 comprises a pipe.

1           17. The system of claim 9 wherein said  
2 first magnetic core is coupled to said sidewall.

1           18. The system of claim 9 wherein said  
2 first magnetic core is coupled to said second annular  
3 element.

1           19. An iris system, comprising:  
2           a body;  
3           a stator assembly, coupled to said body,  
4 comprising a frame coupled to an electrically wound  
5 substantially annular magnetic core;

6 a rotor rotatably coupled to said  
7 substantially annular magnetic core, such that a  
8 channel is defined;

9 a diaphragm coupled to said stator assembly  
10 comprising a plurality of diaphragm leaves pivotally  
11 arranged to form an adjustable aperture substantially  
12 concentric with said channel; a first portion of at  
13 least one of said plurality of diaphragm leaves  
14 coupled to said stator, a second portion of another  
15 of said plurality of diaphragm leaves coupled to said  
16 rotor;

17 a sensor coupled to said body for detecting  
18 aperture diameter data;

19 an actuator coupled to said body, said  
20 actuator adapted to provide electrical current  
21 through windings on said electrically wound magnetic  
22 core such that said rotor rotates in response to said  
23 electrical current; and

24 a controller coupled to said body and  
25 adapted to receive data from said sensor, said  
26 controller containing logic adapted to activate said  
27 actuator in response to said data.

1 20. The iris of claim 19 wherein said body  
2 comprises a telescope.

1  
2 21. The iris of claim 19 wherein said body  
3 comprises a camera.

4                    22. The iris of claim 19 wherein said body  
5 comprises a pipe.

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